



Otford Primary School

Courage, Kindness, Curiosity

Computing Curriculum Document

Intent for Computing Curriculum

Computing has become a major aspect of learning and education with the impact and benefits of computing systems permeating many areas of daily life. At Otford Primary School we aim to give the children the skills they will need to navigate the wider computing curriculum as well as the knowledge they will need to adapt to new technology. Safety is the primary concern when using computing systems and we will ensure that all children will have the necessary knowledge and experience to navigate through the digital world safely and productively. We aim to instil a sense of wonder and fun when using computing systems, where problem solving becomes enjoyable and engaging. Our curriculum coverage also instils a sense of responsibility when acting online and we aim to link the many ethereal aspects of computer usage with real day to day life. The computing curriculum at Otford Primary School provides a strong, secure platform of learning for the children to advance long into their academic and personal futures incorporating aspects of grass roots computer programming as well as the tools they will need to traverse and utilise the internet for inspiration and wider learning.

	Y 1	Y 2	Y 3	Y 4	Y 5	Y 6
Multimedia	Use ICT to generate ideas for their work. Use various tools including brushes, pens, lines, fill, spray and stamps. Use save, retrieve, amend and print. Use the space bar, back space, enter, shift, and arrow keys. Start to use touch when typing.	Discuss which videos to keep and why. Arrange clips to make a short film that conveys meaning. Add simple titles and credits. Select text and make simple changes including bold, italic and underlined.	Acquire, store and combine images from cameras or the internet for a purpose. Use the print screen function to capture an image. Select certain areas of an image and resize, rotate an image. Create a new eBook with a front cover and add or remove pages. Combine text and images within each page and embed sound clips.	Plan what they would like to happen in their animation. Use tools to create an animation. Move items within their animation to create movement on playback. Edit/ improve their animation. Capture video for a purpose. Discuss the quality of videos and choose which to	Create a new eBook with a front cover and add/remove pages/ subpages. Produce a multimedia eBook combining video, pictures, text and audio. Attach author data for publishing and publish book. Collect audio from a variety of sources including own	Plan a multi-scene animation including characters, scenes, and special effects. Adjust the number of photographs taken and the playback rate to improve the quality of the animation. Publish their animation and use a movie editing package to edit/ refine and add titles.

	Word process short texts rather than copying up written work.		Add information about the author and title for publishing. Get quicker at typing using both hands. Use different font sizes, colours and effects to communicate meaning. Align texts left, right and centre.	keep and which to re-shoot. Trim and arrange clips to convey meaning. Add titles, credits, slide transitions, special effects and talk about the effect these have on the audience.	recordings and internet clips. Create a multi-track recording using effects. Edit and refine their work to improve outcomes.	Storyboard and capture videos for a purpose. Plan for the use of special effects/ transitions to enhance their video. Trim, arrange and edit audio levels of video to improve the quality of their outcome. Add titles, credits, transitions, special effects. Export their video in different formats for different purposes.
Programming	Give and follow instructions. Explore outcomes when instructions are given in Sequence. Give a simple sequence of instructions. Discuss/ explore what will happen when instructions are given in a sequence. Give a sequence of instructions to complete a simple task. Instructions use both movement commands and additional commands.	Edit/ refine a sequence of commands. Generate a sequence of instructions. Create a sequence of instructions to generate simple outcome. Discuss how to improve/ change their sequence of commands.	Use the 'repeat' command within a series of instructions. Use the collision detection command and predict the result. Talk about the similarities and difference between different coding applications. Write a simple program in Logo to produce a line drawing. Use more advances Logo programming, including pen up, pen down etc. Write a program to reproduce a defined problem e.g. geometric shape/ pattern.	Create a background and sprite for a game. Add inputs to control their sprite. Use conditional statements (if...then) within their game. Create a 3D digital world for a game designing mazes and obstacles. Add a sprite to their world. Use their sprite to navigate their 3D world with an input.	Use external triggers and infinite loops to control sprites. Create and edit variables. Use conditional statements. Design a 3D world with items to be collected, add dangerous items. Add a program and sprite to navigate their world to collect items and avoid danger. Add a scoring system to their world and signal to the player when they win or lose the game.	Design their own game including sprites, backgrounds, scoring and/or timers. Their games uses conditional statements, loops, variables and broadcast messages. Their game finishes if the player wins or loses and the player knows if they have won or lost. Evaluate the effectiveness of their game and debug if required. Use a keyboard or external game controllers to control the sprites' behaviours.

Online	Talk about websites they have been on. Explore a website by clicking on buttons, arrows, menus and hyperlinks. Navigate 'back' by clicking on the 'back' button. Complete a search under the supervision of adults.	Recognise an email address. Find the @ key on a keyboard Contribute to a class email. Open and select to reply to an email as a class.	Navigate to view their class/school blog. Understand that their class/school blog can be updated from a range of devices. Type in a URL to find a website. Add websites to favourites. Use a search engine to find a range of media e.g. images, text. Think of search terms to use linked to questions they are finding the answers for. Talk about the reliability of information on the internet, e.g. the difference between fact and opinion.	Log in to an email, open emails, create and send replies. Attach files to an email. Download and save files from an email. Email more than one person and participate in group emails by 'replying to all'. Make/ receive and voice and video call. Adjust the audio/video settings to ensure good quality of the call.	Use advanced functions in Google e.g. quotation. Understand websites, such as Wikipedia, are made by users. Use strategies to check the reliability of information e.g. cross checking with books. Use their knowledge of domain names to aid their judgement of the validity of websites. Understand files may be saved off their device in 'clouds'. Upload/download a file to the cloud on different devices. Understand about syncing files using cloud computing folders.	Create a personal blog online. Alter the theme and appearance of their blog, adding background images etc. Create a new post save it as a draft and publish it. Embed photos, hyperlinks and videos into posts. Reorganise posts and remove posts they no longer want.
E-Safety	Make decisions about whether or not statements or images found on the internet are likely to be true. Identify different devices that can go on the internet, and separate those that do not. Identify what things count as personal information. Identify when inappropriate content is accessed and act appropriately.	Identify obviously false information in a variety of contexts. Recognise that a variety of devices (Xbox, PSP etc as well as computers and phones) connect users with others people. Identify personal information that should be kept private. Consider other people's feelings on the internet.	Question the 'validity' of what they see on the internet. Use a browser address bar not just search box and shortcuts. Think before sending and suggest consequences of sending/posting. Recognise online behaviours that would be unfair.	Recognise social networking sites and social networking features built into other things. Make judgements in order to stay safe, whilst communicating with others online. Tell an adult if anything worries them online. Identify dangers when presented with scenarios, social networking profiles, etc. Articulate examples of 'good' and 'bad' behaviours online.	Judge what sort of privacy settings might be relevant to reducing different risks. Judge when to answer a question online and when to not. Be a good online citizen and friend, not a 'digital bystander'. Articulate what constitutes good online behaviour. Find and cite the web address for any information or resource found online	Find report and flag buttons in commonly used sites and name sources of help. 'click-CEOP' button and explain to parents what it is for. Discuss scenarios involving online risk. State the source of information found on the internet. Act as a role model for younger pupils.

					Use different sources to double check information found.	
Data	Know that images give information. Say what a pictogram is showing them. Put data into a programme (pictogram).	Place objects and pictures in a list or a simple table. Make a simple Y/N tree diagram to sort information. Create and search a branching database.	Choose information to put into a data table. Recognise which information is suitable for their topic. Design a questionnaire to collect information. Sort and organise information to use in other ways e.g. graphs.	Choose information to put into a data table. Recognise which information is suitable for their topic. Design a questionnaire to collect information. Sort and organise information to use in other ways e.g. graphs.	Create data collection forms and enter data from these accurately. Know how to check for and spot inaccurate data. Know which formulas to use when I want to change my spreadsheet model. Make graphs from the calculations on my spreadsheet.	Create a data collection form and enter data from these accurately. Know how to check for and spot inaccurate data. Know which formulas to use when I want to change my spreadsheet model. Make graphs from the calculations on my spreadsheet. Sort and filter information. Understand that changing the numerical data effects a calculation.